



LEGISLATION, PROFESSIONAL PRACTICE AND CONTRACTS – ARCH 702

German University in Cairo – Berlin Campus
Winter Semester 2021 / 2022

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Legislation, Professional Practice and Contracts

Session 1 — Outline:

- Round of introductions
- What do we mean by *Legislation, Professional Practice, and Contracts*?
- Transformations affecting (the) architect(ure)
- Course outline and learning outcomes
- Session plan and class policies

Legislation, Professional Practice and Contracts

What do you know about “legislation”, “professional practice”, “contracts”?

Should, why & how do “legislation” and “contracts” concern the architect?

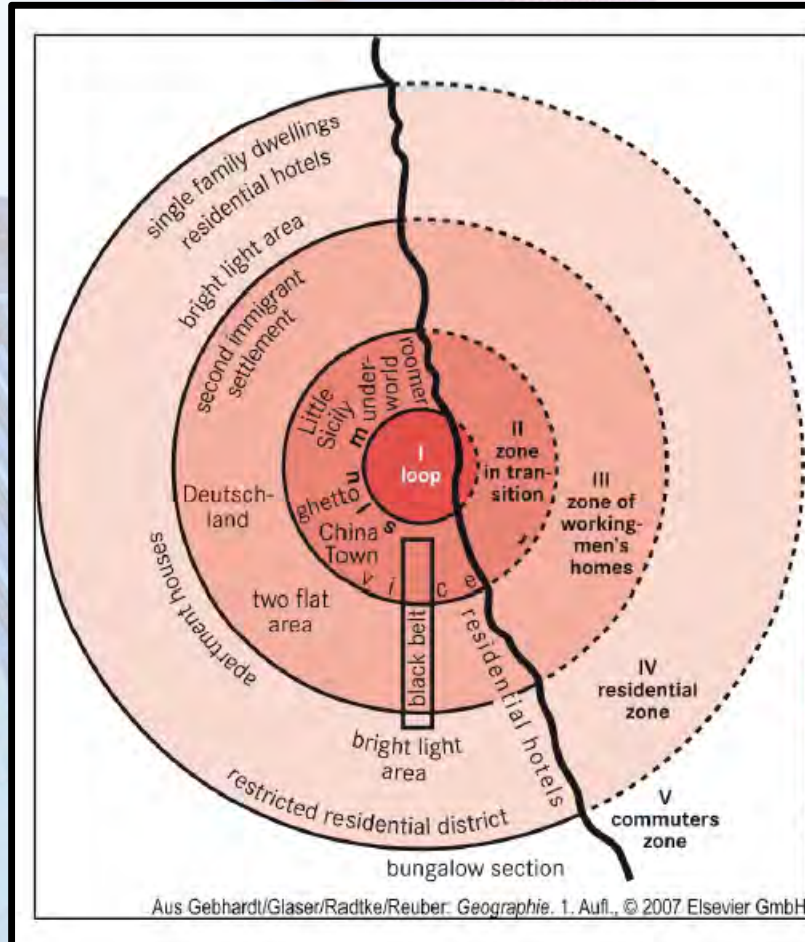
Architecture interconnected

- “Architecture begins where engineering ends.”

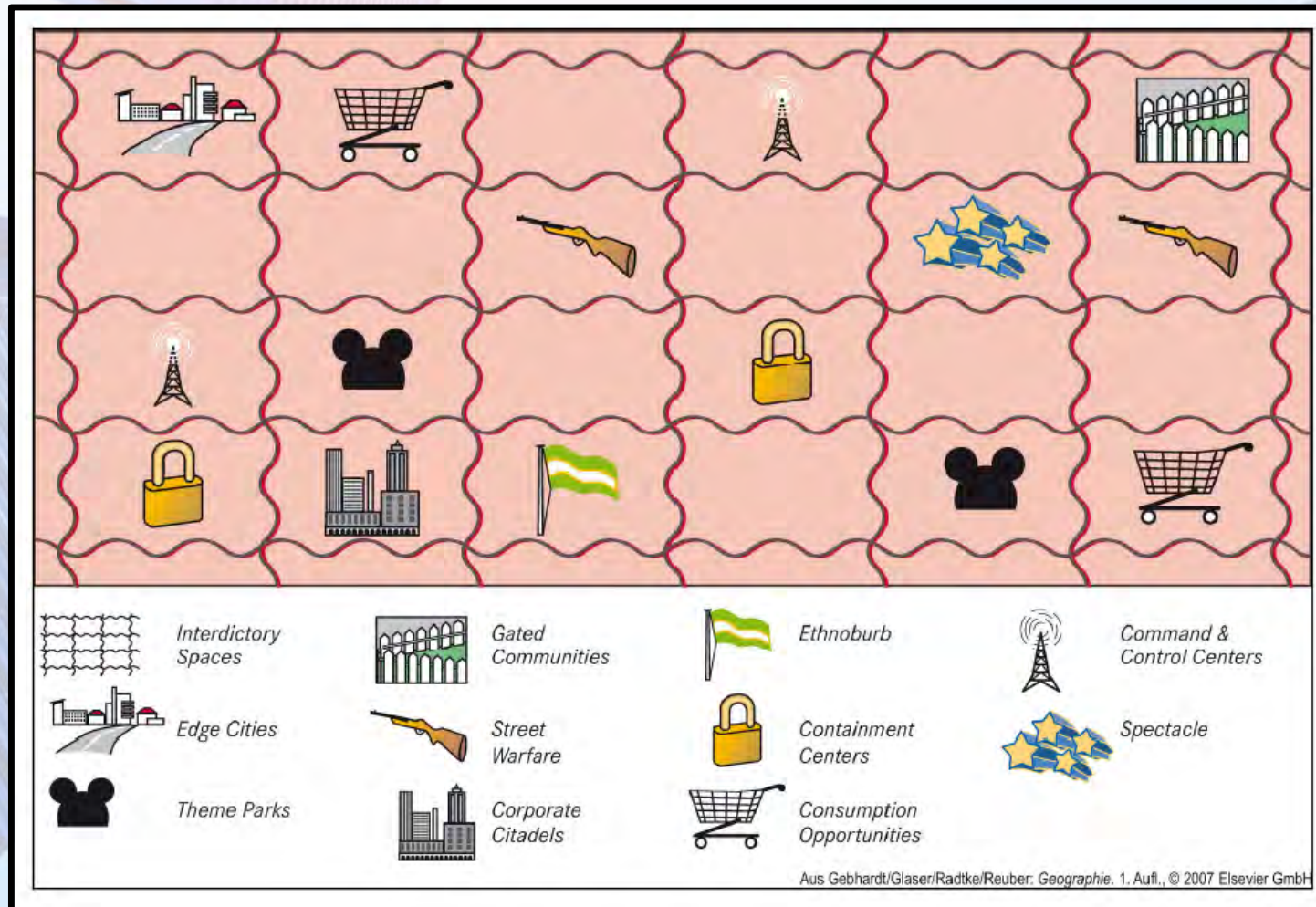
[Walter Gropius, founder of the Bauhaus School in Germany]

- Architecture is at the intersection between the technical and the social;
- Relating (the) architect(ure) to people, markets and institutions;
- Architecture and urban transformations;
- Architecture and changing terrains of legislation and urban governance.

The modern city



The late-modern (contemporary) city



Transformations of and in the city

- **Globalising (upward) shifts:**

- Multinational companies and globalised capital flows;
- Globalisation of urban plans, designs, and urban mega-projects;
- Global problems and supra-national organisations and legal frameworks.

- **Localising (downward) shifts:**

- Decentralisation and privatisation of urban policy;
- Growth and autonomy of private sector;
- “Local needs and problems require custom, local solutions”.

- **Privatising (horizontal) shifts:**

- Growing role of nongovernmental stakeholders in urban development and governance;
- Declining changing role of state institutions and the public sector in the city.

Architecture at the crossroads

What do these transformations have to do with (the) architect(ure)?

What do they have to do with legislation and contracts?

Architecture at the crossroads

What do these transformations have to do with (the) architect(ure)?

- actors involved in construction processes;
- project types and scopes;
- relationship and disputes between actors;
- contractual arrangements: why and to what effect?
- contract types : compensation
- contract types : organisational variation and relationship management
- legislative frameworks.

Course outline

This course raises questions such as:

- who and what type of actors are involved in the construction process?
- what is the nature of the relationship between these different actors?
- what legislative and regulatory frameworks organise the relationship between these actors?
- how can the architect understand and interacts with the social, legislative and institutional environments within which they operate?
- how can the architect manage her*his positionality at the intersection between the local and the global, the public and the private?
- how can the architect cope with rapidly changing realities and less adaptive regulatory frameworks?

Learning outcomes

This course aims to give you *hands-on* and *practical* skills, enabling you to:

- understand and identify stakeholders, actors and ingredients of construction projects;
- understand and propose ways to deal with disputes in the construction process;
- consider different types of contracts and contracting processes when planning a design or construction project;
- comprehend and assess different and unconventional ways of architectural practice;
- understand some of the legislative and regulatory frameworks applicable to Egypt;
- *simulate real-life situations architects grapple with in early- and mid-career stages.*

Next week

Professional practice, project team and design process

- Is architecture an independent profession?
 - “Architecture begins where engineering ends” (Walter Gropius)
 - Project team: relations and responsibilities
 - Phases of the design process from a professional practice perspective
-
- **Assigned reading (all students):** Sidney M. Levy (2010), “Chapter Three: Architectural, Engineering and Contracting Industries”, *Construction Process Planning and Management*. Pp. 45 – 65.
 - **Presentation:** Phases of the architectural design process (from a professional practice perspective)



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Lecture 2 – 3 (Wed. 27.10.2021)

Professional Practice, Project Team and the Design Process

Introducing the course

- **This is not theory! In any given construction process, the architect should be able to:**
 1. identify and understand the nature of the actors involved in the project;
 2. the key market, social and environmental considerations relevant to the project;
 3. the regulatory frameworks relevant to the project;
- **Accordingly, the architect should be able to make strategic choices regarding:**
 1. preferred project delivery system;
 2. preferred contract type used with each of the actors involved;
 3. whether or not to conduct competitive bidding.

Lecture 2 – 3 : Outline

- Architecture as a profession
- Project team and responsibilities
- Phases of the design process
- Negotiating change and disputes
- Working group session #1

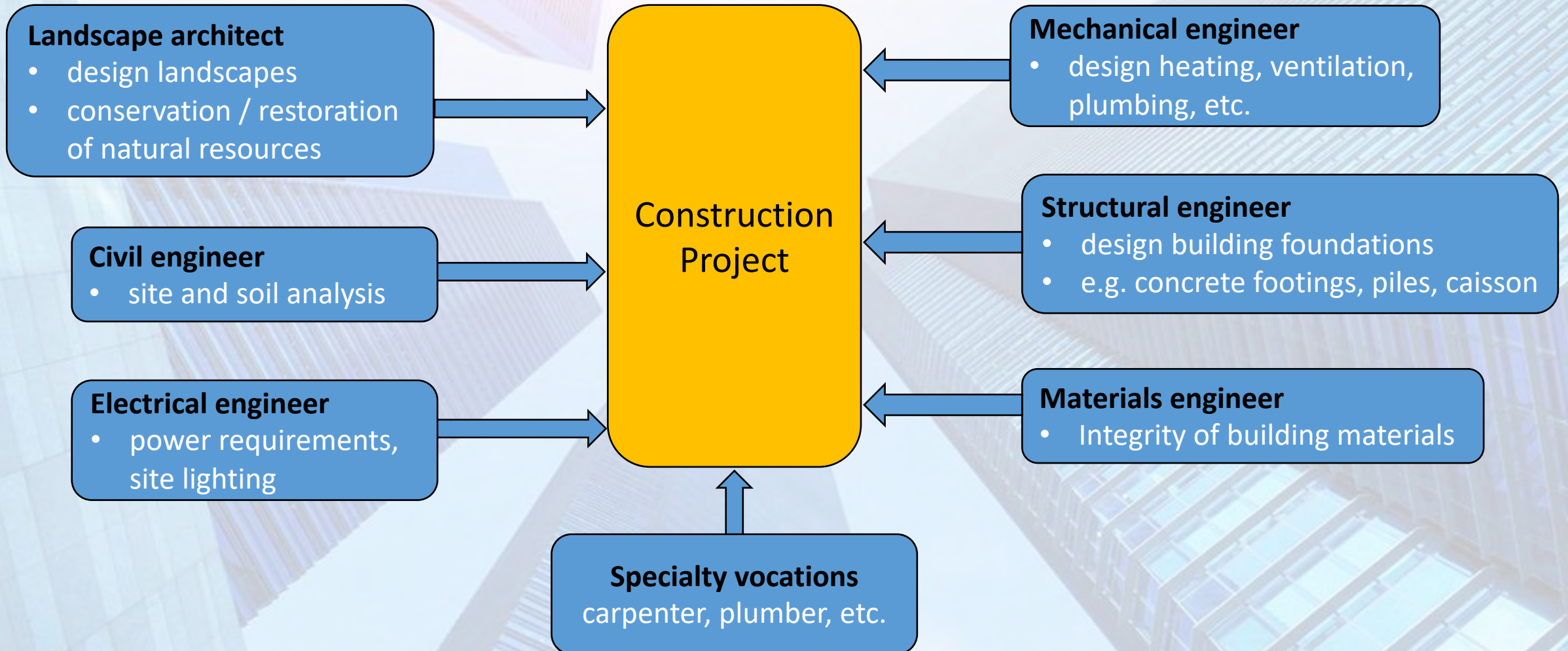
Architecture as a profession

- A **master builder**: is a general construction contractor who offers clients *design* and *construction* services with the help of **on-staff** managers, laborers and specialty vocations;
- (1) competitive economic environments, (2) increasingly specialized and diversified construction industries, and (3) increasingly advanced construction technologies and building material --> the master builder retains fewer on-staff laborers --> divests itself of large workforce and overhead costs;
- Instead, the “master builder” is replaced with **architects** and **general contractors** who outsource management and specialty vocational services to **subcontractors**;
- Architects are responsible for ***planning, designing*** and ***managing*** a wide range of construction projects and structures.

Architecture as a profession

- Typically, architects must meet 3 requirements: (1) training, (2) experience, and (3) licensing;
- Architects can be employed in various organizational set-ups: self-employment (e.g. 20% of US architects), employment in architectural firms with single-digit employees, or employment in giant design firms with annual revenues in the tens of billions of USD;
- e.g. The Arab Contractors (المقاولون العرب): annual revenues ca. EGP 9.22 billion (USD 62 million), employing a workforce of ca. 77,000.
- e.g. Emaar Properties (إعمار العقارية): annual revenues USD 5.83 billion, employing a workforce of ca. 6,600.

Architecture as a profession

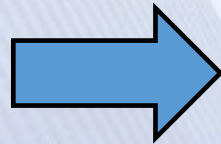


Architecture as a profession

What, then, is the *unique* contribution of **the architect** to the construction process?

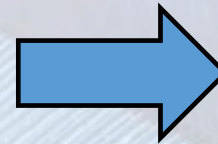
Architecture as a profession

- clients' needs
- occupants' needs
- legal considerations
- market concerns
- social concerns
- environment
- building technologies, theories, techniques



The Architect (Architecture Firm) professional processes

(e.g. designs, schedules,
budgets, project plans)



- designs
- projects
- speciality designs
- buildings
- compounds/complexes
- mega-projects
- new concepts and processes

Architecture as a profession

- **reasons for the professionalization of architecture:**
 - the growing complexity of society and the built environment;
 - the growing complexity of building technologies, materials and techniques;
 - the proliferation of governmental regulations;
 - the legal system --> liability issues --> due diligence through specialization.
- For a builder, the successful completion of a construction process marks *the end* of the project;
- For clients and occupants, the building is but *a means* to satisfying a wider set of requirements (profit, livability, luxury, comfort, special needs, etc.);
- Design professionals reconcile this discrepancy by mobilizing the professional processes at their disposal to design structures that are implementable by the builder and usable by the client/user.



Project team and responsibilities

THE PROJECT TEAM RESPONSIBILITIES



stakeholders

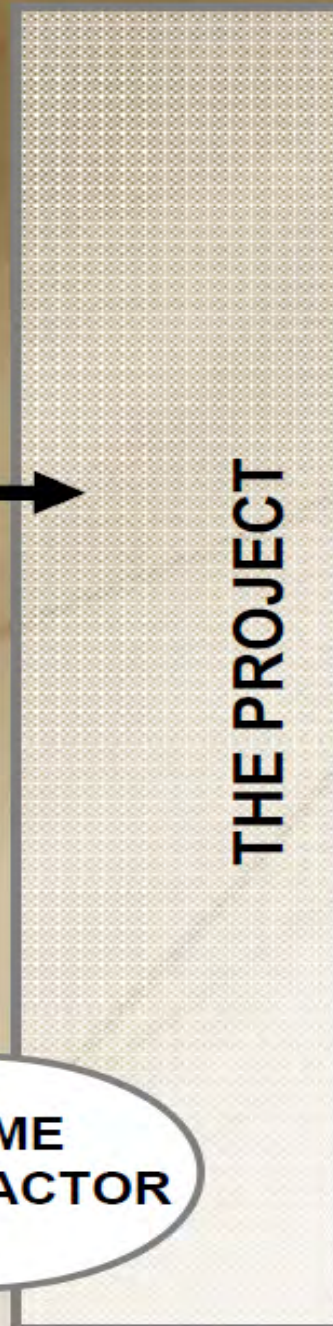
occupants/users

ARCHITECT



THE PROJECT

PRIME
CONTRACTOR



Working group project assignment

	Project	WG members
WG 1	Civil Registry Center (headquarters, New Administrative Capital)	
WG 2	Corniche revitalization and development (Ras El-Bar, Damietta Gov.)	
WG 3	Commercial office buildings (4 towers + amenities. New Cairo)	
WG 4	120-unit beach resort + amenities (Sahl Hasheesh)	
WG 5	Extension 3 (pulmonary diseases) of Beni Suef University Hospital	
WG 6	Private family house (4.5 stories, 3 units. Sheikh Zayed City)	
WG 7	4 toll stations + amenities (Hurgada-Marsa Alam highway, Red Sea)	
WG 8	Commercial center + leisure park (Palm Hills, 6 October City)	

Working group project assignment

Your assignment should address the following questions:

- Identify the client, occupant/user and the main and supporting actors involved.
- What are the possible disputes that may arise during the construction process? When and between whom?
- Which project delivery method is most appropriate for your project?
- In terms of pricing variation, which contract type(s) and subtype(s) are most appropriate for the project?
- In terms of organizational variation, which contract type(s) and subtype(s) are most appropriate for the project?
- To bid or not to bid: how should the client hire contractors and subcontractors?

Working group project assignment

Don't worry!

- To address these questions, you will work in working groups of 5 students each.
- WG sessions will be assigned during class time throughout the semester.
- Each WG will produce a one-page (A3) diagram, outlining the project, mapping actors and relations, and discussing contracting and procurement preferences.

Assignments are due by 17.01.2022

WG presentations on 26.01.2022



Phases of the design process

Phases of the design process

1. Phase One—Pre-design “scout”

- Identify and collect information about the market and potential clients;
- Identify and collect information about client needs, market trends, best practices;
- “Sketch” and pre-market projects that could be of interest to prospective clients.

2. Phase Two—Schematic design “focus”

- Translate and develop “sketches” into “schematic designs”—i.e. designs that define the scope, features, purpose and function of the proposed project;
- In this phase, the design professional tackles in greater detail the *technicalities* of the site, construction process, materials, and outcomes;
- Schematic designs are presented to the client and negotiated/adjusted to approval.

Phases of the design process

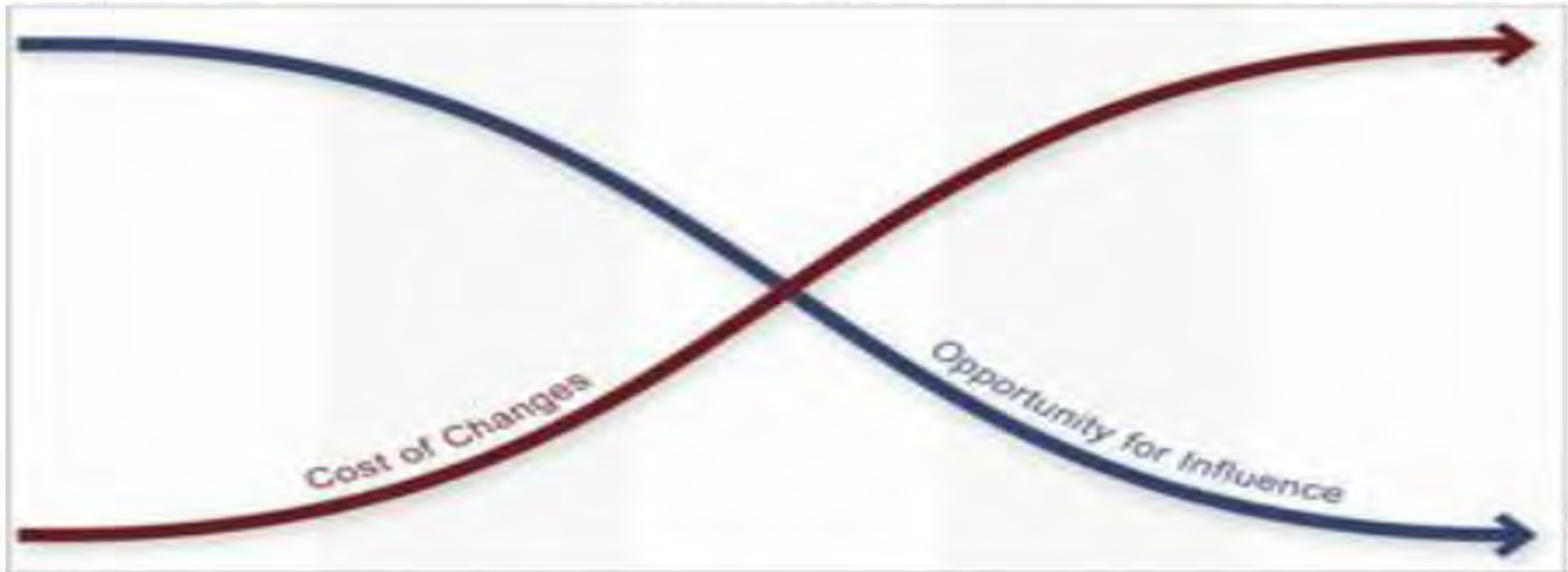
3. Phase Three—Design development “operationalize”

- Once a design has been approved, the architect operationalizes the design through more elaborate drawings, written specifications and strategic plans;
- This is usually a highly technical phase, which involves greater interaction between the design professional(s) and the builders (contractors).

4. Phase Four—Construction and contract administration “implement”

- Entails the execution of a project with and through contractors and subcontractors; also entails coordinating the relationship between owner/client and contractors;
- The architect oversees the construction process and ensures compliance with (1) the approved design, (2) building (and other) regulations, (3) contractual requirements.

Negotiating change and disputes



Phase One:
Pre-Design and
Project Initiation

Phase Two:
Schematic Design

Phase Three:
Design
Development

Phase Four:
Construction and
Contract Admin.

Phase Five:
Handover, Closeout
and Post-Delivery

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Lecture 4 – 5 (Thu. 03.11.2021)

The Construction Process: Actors, Ingredients and Disputes

Lecture 4 – 5 : Outline

- Design process: Negotiating change, costs, and disputes
- Actors in the construction process
 - Center-stage actors
 - Supporting actors
- Project delivery systems
- Contracts: why and how?

Negotiating change and disputes



Phase One:
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Negotiating change and disputes

Sloppy contracting and contract administration

- Sweet and Schneier, p. 110—111

The sovereign power in international transactions

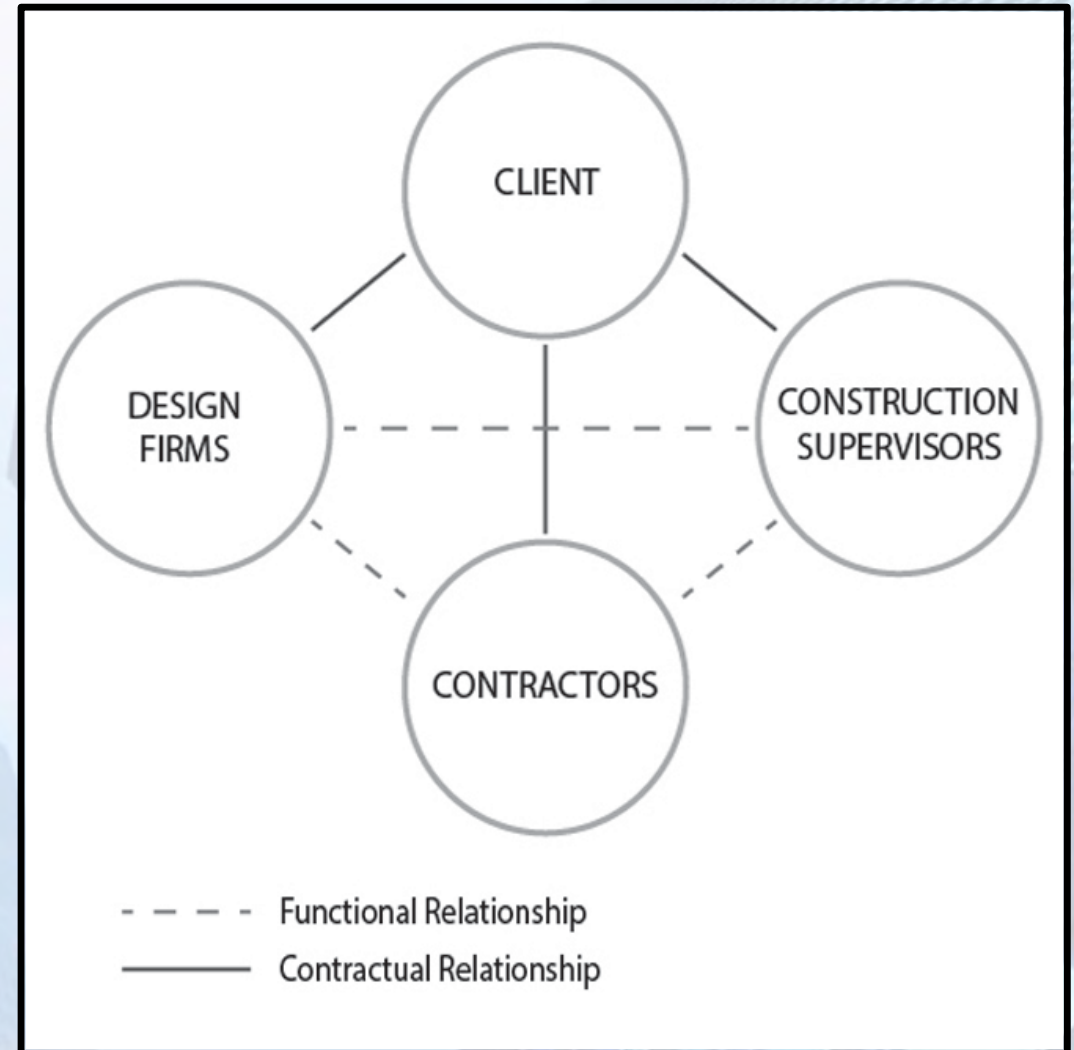
- Sweet and Schneier, p. 111



Actors and ingredients

The Construction Process: Actors

- **Client**
- **Prime contractor**
 - e.g. general contractor;
- **Subcontractor(s)**
- **Design professional (architect)**
- **Construction manager / supervisor**
- **Occupant / user**



The Construction Process: Actors

Who is the client?

- The client is the entity which **commissions** the project and **contracts** the design (architect) and build (contractor) professionals to realize it;
- It **provides** the site, the preliminary design (idea), the organizational process, and the funds for the project.
- The client is **not** necessarily the **owner** of site, money or end product! However, it is the sole entity with the **legal prerogative** to contractually engage the resource and hire the design and construction professionals.
- From the perspective of the design professional, the client is “the person with whom the architect will deal on a remarkably intimate basis”.

The Construction Process: Actors

Types of clients in the construction industry

- **Public sector vs. private sector:**
 - Distinct regulatory guidelines regarding: (1) how to select design professionals and contractors, and (2) choice of contracting systems;
 - Occupant-owner relationships are different --> logics and intentions behind a given construction project are different.
- **Experienced (repetitive) vs. inexperienced (one-shot):**
 - Different degrees of experience and knowledge of market and processes;
 - Different infrastructures and resources available at client's disposal to assist architect and contractor.

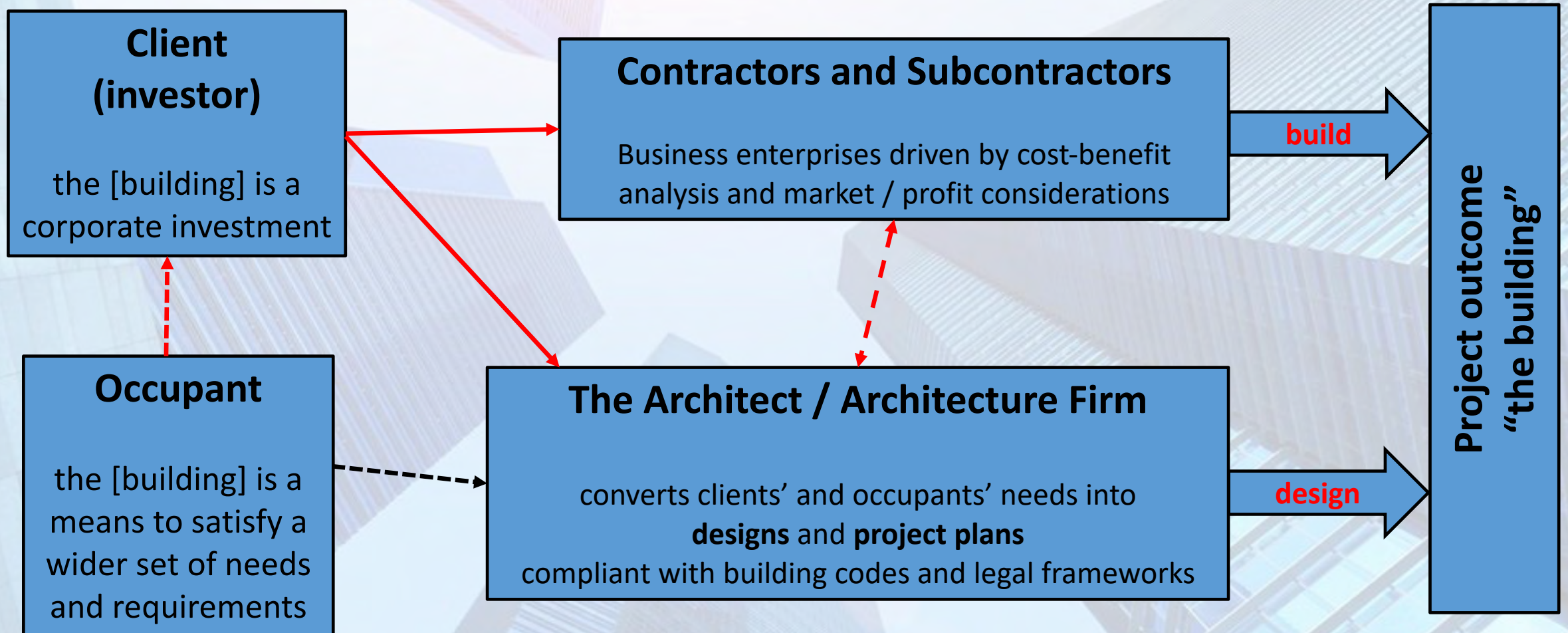
Public/private client vs. public/private project

The Construction Process: Actors

Who is the occupant / user?

- **Why is it increasingly important to distinguish between occupant and client?**
 - the expansion of large-scale government projects (ca. 1950s—);
 - the commercialization of architecture, construction and real estate (ca. 1990s—);
 - the expansion of large-scale, commercial projects (corporate investments);
 - construction of projects intended for *public use*.
- **What impact does this distinction have on the architect?**

The Construction Process: Actors



The Construction Process: (other) Actors

1. the client chain

Clients typically commission projects financed by other actors: the **financiers** and **lenders**:

- it is common that public projects are financed by appropriations made by **legislatures** or by executive **government** bodies (public funds);
- private projects are typically financed by the **banks**, **investors**, and other **credit providers**.

2. the contractor chain

In addition to **(prime) contractors**, a contractor chain includes a large number of **sub-** and **sub-subcontractors**—e.g.:

- **suppliers** of material and equipment;
- **creditors**, **lenders**, and **surety bond providers**;
- many actors on the contractor chain are often represented by **trade and professional unions** and **interest group associations**. These too may exert influence on the project.

The Construction Process: (other) Actors

3. the design professional chain

- architects are likely to hire **consultants** whose reputations (and exorbitant) consultancy fees are at stake;
- for large or 'important' projects, architects are likely to hire **specialized employees** to supervise construction processes on a near-daily basis to ensure compliance with designs, legal codes, building codes, and contractual agreements;
- stakes are higher when **high-end consultants** and **starchitects** are involved.

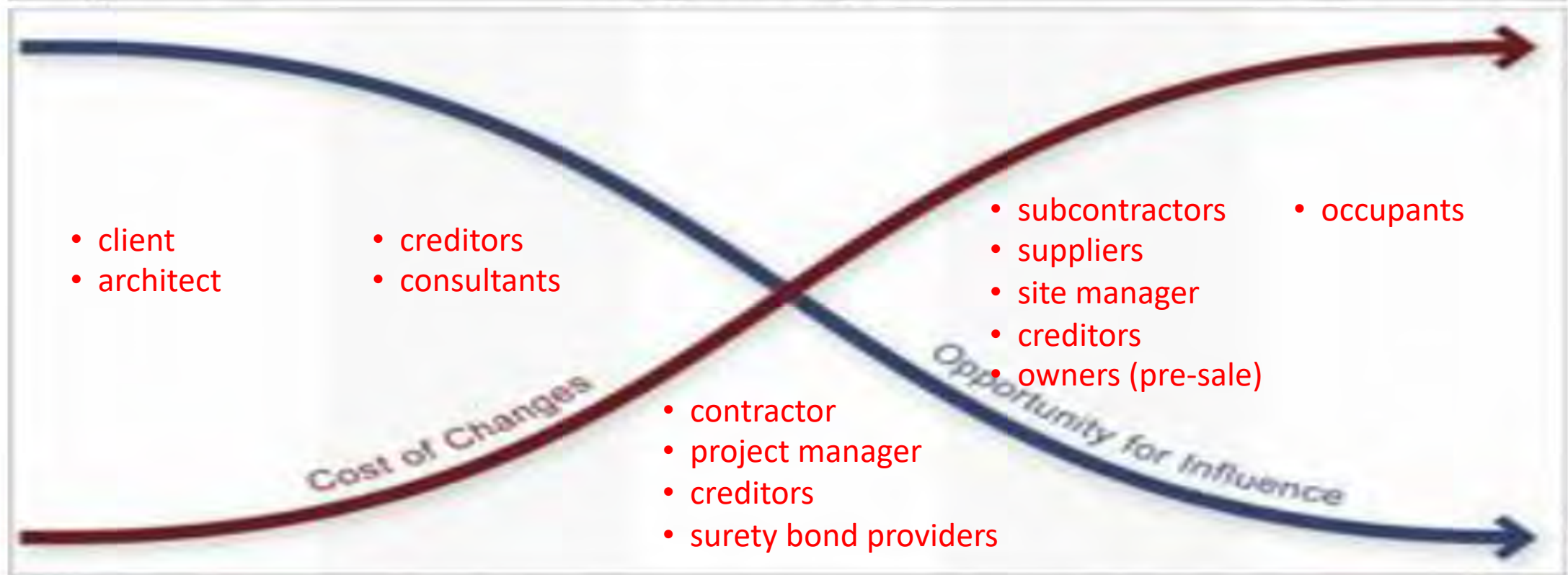
4. other actors

- insurers;
- political stakeholders;
- civil society (e.g. home-owner unions, student unions, doctors' associations, teachers union);
- public opinion.

... and?

is it important to know the whole range of actors involved in a construction process even if I'm not contractually involved with them?

Negotiating change and disputes



Phase One:
Pre-Design and
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Project delivery process and systems

Project delivery process

Client

conception and
initiation of the
construction project

Project delivery process

1. **select appropriate project-delivery system**
2. select and contract design professional
3. negotiate and approve designs and schedules
4. select and contract general contractor
5. implement: construction, contract administration and project management

Project outcome

Project delivery systems

(Bid)-Design-Bid-Build (separating design + build)

- The most common project-delivery system for public-sector clients and among many private-sector clients;
- Client commissions the design professional to produce a design proposal (with the complete set of designs, maps, specifications, and project details);
- Design professional produces **project documents** (e.g. tender documents) and then applications (e.g. bids) are invited. Applicants will review designs and submit their applications. The **quality of their applications will depend on the quality of designs, plans and specifications**;
- The client **invites** the winning applicant to implement the project;
- The winning applicant will ***develop and redesign the project***, submit a revised design and price (rebid / adjusted application) for final approval and contracting by client.

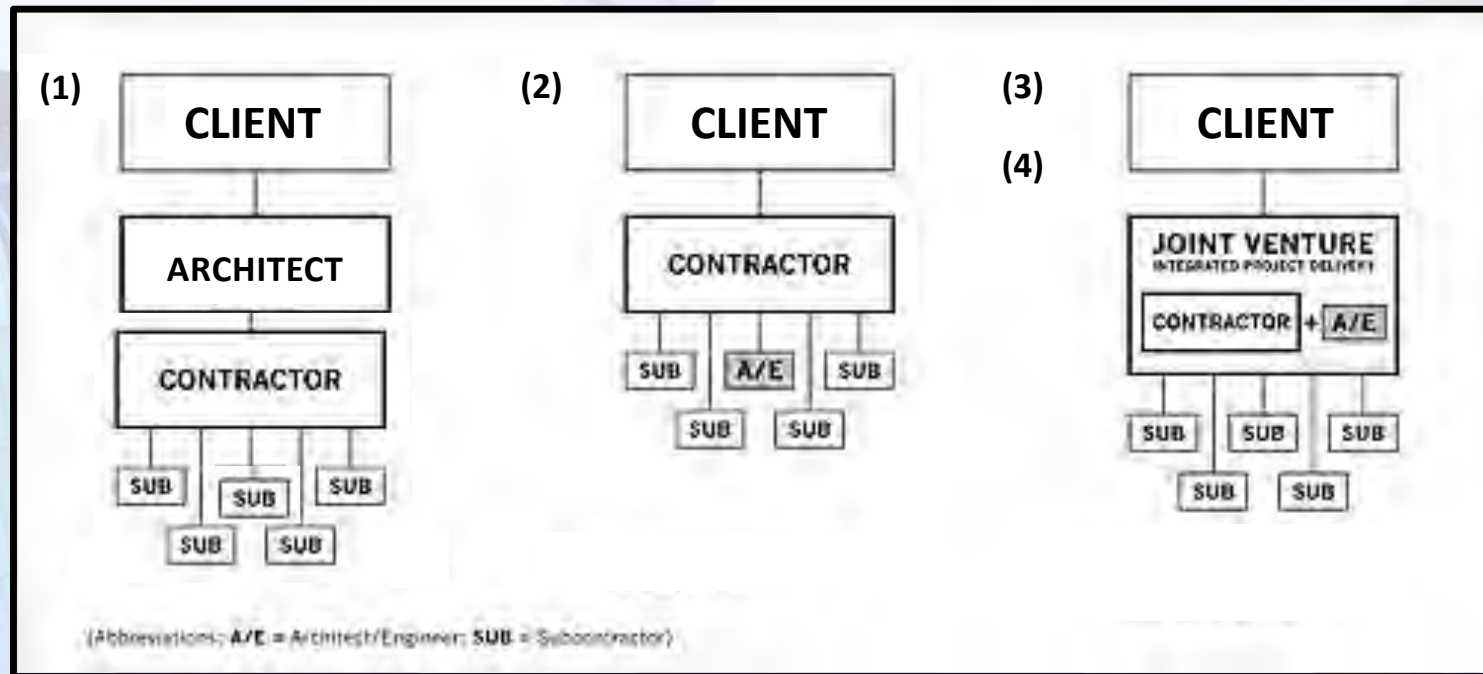
Project delivery systems

(Bid)-Design-Build (combining design + build)

- Increasingly popular in private- and public-sector due to lower costs, process time;
- In this form of project-delivery system, the owner places the design *and* build in the hands of one entity—the “full-service design-builder”;
- **The “full-service design-builder” may take on various forms:**
 - a design professional subcontracting and leading a design-build team;
 - a prime contractor subcontracting architectural services;
 - a purposefully established firm;
 - a joint venture between design professional and prime contractor.

Project delivery systems

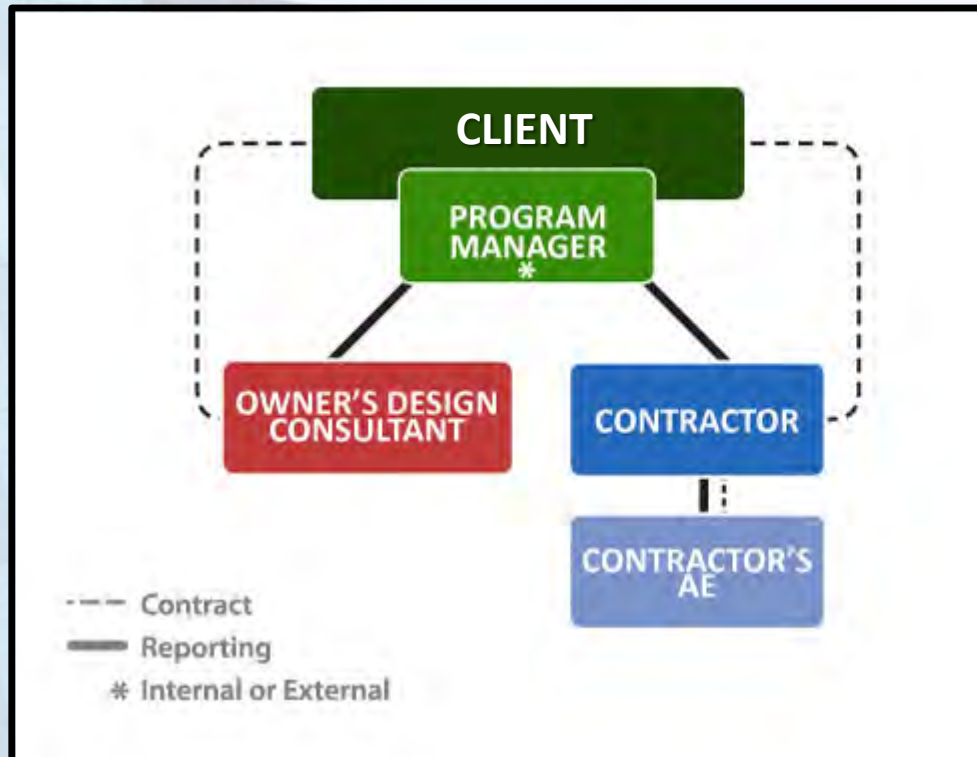
(Bid)-Design-Build



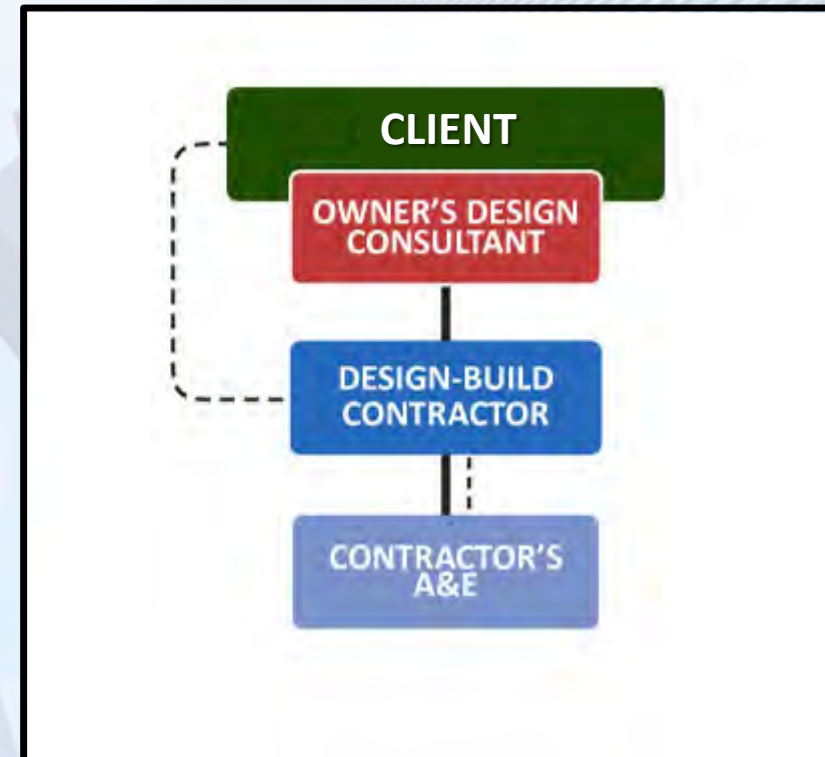
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Project delivery systems

(Bid)-Design-Bid-Build



(Bid)-Design-Build



Project delivery systems

(Bid)-Design-Bid-Build



(Bid)-Design-Build



Project delivery systems

(Bid)-Design-Bid-Build

- ensures higher competition --> incentivizes bidders to offer lower prices, better quality, and more innovative designs;
- better price-time-quality deals for the owner;
- reduces the likelihood of giant design-build conglomerates emerging --> healthier market and business environment;
- preparation of tender documents by a design professional --> ensures better designs and higher quality construction bidders;
- client: separate design and build contracts.

(Bid)-Design-Build

- lower costs and process time;
- client manages a prime design-build contract, relationship between architect and contractor is managed independently;
- ensures synchrony between design and build;
- thus, fewer change orders --> and eliminates design-bid-redesign-rebid processes;
- entire schedule for the project is significantly shortened;
- architect coordinates between the contractor and client.



Contracts and contracting



Contracts and contracting

Construction and project-delivery processes are a continuum of contracts:

- the client **contracts** a design professional / architect to produce a design;
- the client seeks financing from financiers / lenders—**contract**;
- the client **contracts** a general contractor (builder) to implement—**contract**;
- the client-general contractor agreement—**trickle-down contracts** (sub-contractors);
- the client employs a project manager / architect to supervise implementation—**contract**;
- the client sells units to occupants pre-completion (“pre-sale”)—**contract**.



Working group session

Working group project assignment

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